

**WHAT IS CLAIMED IS:**

1. 1. A lighting system for a display, comprising:
  2. a light source providing invisible light having a wavelength in
  3. a spectrum not visible to the human eye;
  4. a reflective layer having at least one of a phosphorescent and
  5. a fluorescent surface reflecting the invisible light from the light source and
  6. converting the invisible light into visible light visible to the human eye;
  7. and
  8. a display layer in which pixels of the display layer may be
  9. altered by applying an electrical charge to the display layer in a controlled
  10. manner, the display layer being illuminated by the visible light from the
  11. reflective layer.
1. 2. The lighting system of claim 1, wherein the light source
2. includes a light guide.
1. 3. The lighting system of claim 1, wherein the light source is
2. provided above the display layer.
1. 4. The lighting system of claim 1, wherein the light source is
2. provided below the display layer.
1. 5. The lighting system of claim 1, wherein the reflective layer
2. includes phosphorescent coatings on a substrate.
1. 6. The lighting system of claim 1, wherein reflective layer
2. includes metallized coatings on a substrate.
1. 7. The lighting system of claim 1, wherein the reflective layer
2. includes fluorescent coatings on a substrate.

1        8.     The lighting system of claim 1, wherein the light source  
2     includes a light emitting diode (LED).

1        9.     The lighting system of claim 1, wherein the light source  
2     provides at least one of ultraviolet (UV) light and infrared (IR) light.

1        10.    A method of producing an image on a display;  
2                generating a source of invisible light, the light having a  
3     wavelength in a spectrum not visible to the human eye;  
4                distributing the invisible light over the surface of a reflective  
5     layer, the reflective layer including at least one of a phosphorescent and a  
6     fluorescent surface;  
7                reflecting the invisible light from the light source by the  
8     reflective layer;  
9                converting the invisible light into visible light visible to the  
10    human eye; and  
11               illuminating a display element with the visible light, the  
12    display element including individually selectable pixel elements.

1        11.    The method of claim 10, wherein the source of light includes  
2     a light emitting diode (LED).

1        12.    The method of claim 10, wherein the invisible light includes  
2     light having wavelengths in the ultraviolet (UV) spectrum.

1        13.    The method of claim 10, wherein the invisible light includes  
2     light having wavelengths in the infrared (IR) spectrum.

1        14.    The method of claim 10, wherein the reflective layer includes  
2     a metallized surface.

1        15. The method of claim 10, wherein the display element is a  
2 liquid crystal display element.

1        16. The method of claim 10, wherein the display element is an  
2 electronic paper (e-paper) display element.

1        17. A display system, comprising:  
2                a light source providing invisible light having a wavelength in  
3 a spectrum not visible to the human eye;  
4                a light guide, dispersing the invisible light over a defined  
5 region;  
6                a light converter, converting the invisible light to light having  
7 a wavelength visible to the human eye; and  
8                a liquid crystal display layer receiving and transmitting the  
9 visible light.

1        18. The display system of claim 17, wherein the light guide  
2 overlays the liquid crystal display.

1        19. The display system of claim 17, wherein the liquid crystal  
2 display overlays the light guide.

1        20. The display system of claim 17, wherein the light converter  
2 includes phosphorescent coatings on a substrate.

1        21. The display system of claim 20, wherein the light converter  
2 includes metallized coatings on the substrate.

1        22. The display system of claim 17, wherein the light converter  
2 includes fluorescent coatings on a substrate.

1        23. The display system of claim 23, wherein the light converter  
2 includes metallized coatings on the substrate.

1        24. The display system of claim 17, wherein the light source and  
2 light guide combine to form a front lighting system.

1        25. The display system of claim 17, wherein the light source and  
2 light guide combine to form a back lighting system.

1        26. The display system of claim 17, wherein the light source  
2 includes a light emitting diode (LED).

1        27. The display system of claim 17, wherein the light source  
2 provides at least one of ultraviolet (UV) light and infrared (IR) light.